

**Amendments to the Specification:**

Please replace the abstract with the following amended paragraph:

**ABSTRACT**

~~Systems and methods for sensing the temperature of the rotor magnets of an electric motor are provided to facilitate the determination of motor performance characteristics such as the torque of the rotor.~~

A method and apparatus is herein disclosed for determining the motor performance of an electric motor through monitoring the temperature of rotor magnets. The temperature is determined by initially heating the rotor magnets to two known temperatures and subsequently recording the temperature at each known temperature. From the known and recorded temperatures, an offset, if any, is calculated. An actual temperature is then determined from the subsequent temperatures of the magnets and the offset. The actual temperature is then used as a basis to determine the motor performance.